



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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<b>(21) International Application Number:</b> PCT/US96/11396 <b>(22) International Filing Date:</b> 10 July 1996 (10.07.96) <b>(30) Priority Data:</b> 60/002,171      11 August 1995 (11.08.95)      US <b>(71) Applicant:</b> MINNESOTA MINING AND MANUFACTURING COMPANY [US/US]; 3M Center, P.O. Box 33427, Saint Paul, MN 55133-3427 (US). <b>(72) Inventors:</b> BRIES, James, L.; P.O. Box 33427, Saint Paul, MN 55133-3427 (US). HAMERSKI, Michael, D.; P.O. Box 33427, Saint Paul, MN 55133-3427 (US). <b>(74) Agents:</b> HUEBSCH, William, L. et al.; Minnesota Mining and Manufacturing Company, Office of Intellectual Property Counsel, P.O. Box 33427, Saint Paul, MN 55133-3427 (US).		<b>(81) Designated States:</b> AU, CA, JP, KR, MX, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).  <b>Published</b> <i>With international search report.</i>
<b>(54) Title:</b> REMOVABLE ADHESIVE TAPE WITH CONTROLLED SEQUENTIAL RELEASE		
<b>(57) Abstract</b>  <p>Double-sided stretchable adhesive tapes are described for use in conventional applications, particularly including the mounting or joining of an object to another surface. An improvement lies within the ability to control the timing of the debonding of both surfaces so that one adhesive surface releases before the other. The earlier release can be either on the object side or the surface side, depending on the desired effect. The present invention is applicable to all stretchable tape constructions including the use of plastic backing materials and/or elastic backing materials and allows such an object to be removed without risking substantial snap-back of the adhesive tape or catapulting of the object. The aforementioned advantages can be achieved by a double-sided adhesive tape having a stretchable backing layer, plastic or elastic, and having a lower-adhesion or non-adhesive portion of one adhesive surface, so that a corresponding greater adhesion adhesive portion of the other side remains more aggressively adhered to a surface during stretch removal while the portion of the one adhesive surface is less aggressively adhered or completely released from its surface. A non-adhesive portion may be adhesive-free, or may be an adhesive layer portion which is rendered non-adhesive. A lower-adhesion portion may comprise a low adhesion material, i.e., a weaker adhesive, or may be rendered lower in adhesion by a treatment or coating.</p>		

